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THE DECLINE OF PRICES OF CEREALS

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The National Agricultural Conference, held in Washington the last week in January, was so engrossed with the program of remedies that it was not able to give exhaustive attention to diagnosis. A great deal of ground had been covered in the congressional hearings before the Joint Commission of Agricultural Inquiry. Certain ills of the farmer date from the last century; others developed during the war; some were the consequence of the boom; and several were the back-wash of the down-wave of the business cycle. It was difficult to segregate these disabilities. In any event, such segregation would have entailed exhaustive quantitative researches, for which the Conference had not time. It seemed necessary for the Conference to adopt a program of remedies that resembled a "shotgun prescription." As in the case of most shotgun prescriptions designed to relieve a complex of symptoms, some of the remedies seem incompatible. Prices of cereals were rising at the time of the meeting of the Conference. Since then prices have again declined, though not to the low level of 1921.

The basic fact of the economics of the world during 1920 and 1921, from the standpoint of price, was that in each country the gold prices of raw materials declined precipitously. Price decline began in the fall of 1919 in some countries with some commodities; and the movement lasted in some coun-

tries with some commodities until the fall of 1921. The decline was from a peak of very high prices. The ascent of prices in this country occurred in three stages. The first result of declaration of war in 1914 was a transient fall in prices. This was followed by gradual increase in prices until the entrance of the United States into the war. From this date, prices of raw materials were fairly stabilized, though trending gradually upwards, despite indirect governmental control. Following the armistice a transient decline of price occurred. This was succeeded by a rapid increase, the peak varying for most commodities from two and one-half to three and one-half times the pre-war figures. The decline was more spectacular than the ascent, partly because it occurred in a shorter time and partly because of the attendant palsy of industrial processes. There is more exhilaration in soaring than in falling.

The fundamental problem for agriculture concerns the *relative* decline in prices. The data of previous business cycles indicate that at such times prices of raw materials fall disproportionately, decline in the price of semi-finished goods lags, adjustment in wholesale prices of semi-finished and finished goods lags still more and decline in retail prices lags most of all. This may be termed the hysteresis of the business cycle. The experience of previous business cycles forecasted a period of a number of months during which the farmer inevitably would see his prices decline to a low level, while the prices of finished goods he desired remained high.

Throughout public discussions two assumptions appear, seldom stated openly but suggested inferentially. Indeed, they are rather more taken for granted than predicated. The first is that the agricultural products of the American farmer were hit particularly hard; the second, that the decline in price of agricultural products exceeded that of minerals, metals and forest products. With these propositions predicated, the farmer was revealed as the victim of particularly unfortunate calamity, entirely apart from his admitted disability in the matter of credits.

The first proposition has little foundation. Raw agricultural products did not suffer comparable declines in price. In each country some declined more than others, and prices in different countries displayed fluctuations. The heaviest decline in the price of a raw material was observed in rubber.

The enormous expansion of rubber plantations and the defencelessness of labor in rubber countries are two factors in explanation of this. It would require an intensive study of each raw material, from the commodity point of view, to explain relative variations in decline. Sometimes an explanation is easy. For example, the price of zinc declined more than the price of lead. One reason lies in two particular uses of these two metals. A prominent use of zinc is in the manufacture of automobile tires; a prominent use of lead is in the lining of coffins. Hard times made a great difference in the consumption of tires but little difference in the need for coffins. The statistical data of the world are not now adequate to explain variations in declines of price of different agricultural commodities in the same country and in the world.

The general idea that prices of agricultural raw materials declined more than those of minerals and metals is more susceptible of analysis. Even here, however, a comprehensive investigation is probably not yet possible. In the nature of their utilization, despite the fact that each metal has certain uses in which it appears alone, fabrications of metals are co-ordinated with each other, with fibres and wood, and rest on coal. The coal situation of Europe since the armistice has been kept in an abnormal condition by the coal clauses of the Treaty of Versailles, disorganization in Russia, conflict in Upper Silesia, the strikes in the United Kingdom and the temporary economic abnormalities resulting from the transfer of the Saar and Alsace-Lorraine to France. During the war many civilian uses of iron and the non-ferrous metals were restricted by governmental ruling and blockade. Efforts at repair of depletion have tended to make interpretation of relations of production and consumption unclear. When all is said, however, despite the high price of coal in the United States during the period when the prices of other raw materials were falling rapidly, it cannot be effectively argued that agricultural raw materials suffered decline in price of a different order of magnitude from that suffered by minerals and metals. Coal and wood constitute special cases.

The following table presents the data for relative prices of the chief cereals and four non-ferrous metals. The average 1913 price is given as 100. The peak prices were the highest wholesale market prices. The lowest prices were the lowest wholesale market prices in 1921. The figures are drawn from

the several issues of Survey of Current Business, Department of Commerce.

	Pre-war price	Peak price a	Low price b	b/a
Wheat -----	100	302	119	0.39+
Rye -----	100	451	139	0.30+
Corn -----	100	331	75	0.22+
Oats -----	100	296	90	0.30+
Barley -----	100	325	89	0.27+
Copper -----	100	230	75	0.32+
Lead -----	100	261	100	0.38+
Zinc -----	100	386	80	0.20+
Tin -----	100	224	60	0.27+

For comparison let it be recalled that the peak of the wholesale index number of all commodities stood at 272, and the lowest point in 1921 was 148. The gross value of all agricultural products declined from the 100 of 1919 to 76 in 1920 and 52 in 1921. The comparison between prices of cereals and metals is not exact, in that wholesale prices of metals are practically identical with producers' prices, while wholesale prices of cereals are considerably higher than prices paid to growers.

The effect of decline in price can not be determined by direct comparison, but must be considered in connection with cost of production. Even though two raw materials decline comparably in price, if the relative cost of production of one has been higher than that of the other, this has the same effect as disproportionate price decline. That the costs of production of the crops of 1919, 1920 and 1921 were high admits of demonstration. That they were relatively higher than the costs of production of minerals, metals, coal and forest products may be susceptible of demonstration, but I am acquainted with no such demonstration.

In comparing price declines between different commodities, variables lie for the most part in five directions : (a) Foreign demand; (b) the domestic market; (c) curtailability of production; (d) situation of stocks; and (e) state of credits.

The foreign demand is direct or indirect. The direct demand is reflected in exportation of the material in the raw or

fabricated state. The indirect demand is reflected in domestic consumption called into being as a result of foreign demand for other American goods. For example, exportation of automobiles might result in increased consumption of foods in the manufacturing centres.

Domestic demand includes consumption of agricultural products as foodstuffs and as industrial materials; the former quite inflexible, the latter flexible.

Curtailability of production means the power to reduce supply when demand declines and prices fall.

Situation of stocks means volume of stocks of goods on hand contrasted with consumption.

State of credit reflects the ability of producers and holders of raw material to keep them from the market. Forced liquidation of materials, when loans against them cannot be continued at the option of the borrower, may have the same result as new production of the material.

The writer has searched through the data of the various materials to find a metal well suited for comparison with a cereal. Only with a cereal are the relations simple enough to permit of comparison. One must select materials for which official data are available. It is necessary that the materials be common articles with a wide degree of use. In theory, one may select two materials possessing the same variables and contrast the declines in prices. Or one may select materials with comparable declines in prices and contrast the variables. It is possible to combine these procedures in an analysis of the data of copper, wheat and corn.

Strictly speaking, corn is preferable to wheat, because the forms of consumption are more manifold and agricultural production less specialized. Wheat (outside of durum wheat that has its own price relations) has only one prime use, the manufacture of flour. Seed, flour milling and export trade comprise the picture of wheat, apart from a few breakfast foods and the use of tailings and low grade wheat as animal feed. Corn on the other hand has many uses. Four-fifths of the crop is consumed on the farm. Of the portion that leaves the farm, the final products in the shape of consumers' goods extend over a varied field. The corn used on the farm is also employed for many uses. Corn is used as feed for young animals, breeding stock, work animals, dairy cows, for hogs for the production of pork and for cattle for the production of beef. Con-

siderable corn is employed in the manufacture of industrial alcohol. The corn-products factories separate corn into an edible oil, glucose, starch, hominy, gluten, a soap stock and a feed. Thus we find the uses of corn spread over a variety of agricultural and industrial processes.

Copper, like corn, is marketed largely as a producer's goods. Little copper reaches the hands of the ultimate consumer as copper articles, unmixed with other materials. The largest uses of copper are in transmission wires, the fabrication of electrical apparatus and equipment, in alloys and bearing metals, as copper salts in technical, chemical and dyeing operations, and in a variety of machines, tools and utensils. We are importers as well as exporters of copper. The imports of copper are largely in the state of raw material, produced in mines under the control of, or the actual property of, American copper producers. The exportation is largely in the form of producers' goods. We are importers and exporters of corn. The import of corn is largely for use on the Atlantic seaboard, made possible by low cost of production in Argentina and cheap ocean freight rates. The corn products companies have, however, a particular reason for the importation of Argentine corn, since it is richer in fat than the maize of this country. Our exports of corn are particularly as feed to Canada and Europe, as food to Mexico and the West Indies and as corn products quite generally. We import and export wheat. Apart from the border trade, we import hard Canadian wheat as a premium high-gluten wheat. From the Atlantic and Gulf ports we export the general price run of flour wheat, durum wheat, high grade and clear flours. From the western coast we export soft wheat and flour to the Orient.

The data, drawn from the Departments of Agriculture, Commerce and Interior, are presented in the table below. The value indices are not drawn from wholesale index numbers or census index numbers. The valuations represent the estimates of the Department of Agriculture and the Department of the Interior for the production of the year. A too literal use of the figures for value must not be made, because the viewpoint in the determination of the figures was not identical for the grains and for copper. With qualifications, these figures may be properly employed for purposes of general comparison.

COPPER*

	1919 Thousands	1920 Thousands	1921 Thousands
Production smelter copper (pounds)	1,286,419	1,209,061	505,586
New refined copper—			
(a) foreign and domestic-----	1,805,307	1,634,909	1,020,027
(b) domestic-----	1,433,486	1,182,423	609,414
Imports-----	429,388	485,668	350,383
Exports-----	516,628	624,054	628,805
Net exports-----	87,240	138,386	278,422
Stock at beginning of year-----	180,000	631,000	659,000
Stock at end of year-----	631,000	659,000	459,000
Withdrawn on domestic account (apparent consumption)-----	914,472	1,053,838	610,989
Net export and withdrawal on do- mestic account-----	1,001,712	1,192,224	889,411
Value domestic production-----	\$239,274	\$222,467	\$65,221
Production index (1919 = 100)			
(a) domestic smelter-----	100	94	39
(b) domestic refined-----	100	82	42
(c) domestic and foreign-----	100	90	56
Disposal index (1919 = 100)-----	100	119	89
Consumption index (1919 = 100)---	100	115	66
Value index (1919 = 100)-----	100	93	27

CORN†

Production (bushels)-----	2,816,318	3,230,532	3,081,250
Imports-----	11,213	7,784	164
Exports-----	11,193	17,761	129,055
On farms on following March 1---	1,045,575	1,546,832	1,313,120
Shipment out to following March 1	470,328	705,481	590,505
Available for consumption (carry- over disregarded)-----	2,816,338	3,220,555	2,952,360
Value of crop-----	\$3,781,000	\$2,150,000	\$1,303,000
Production index (1919 = 100)---	100	114	109
Value index (1919 = 100)-----	100	56	34

WHEAT‡

Production (bushels)-----	968,279	833,027	794,893
Import (wheat and flour)-----	7,984	39,411	27,632
Export (wheat and flour)-----	267,305	307,629	355,548
Net export (wheat and flour)---	259,321	268,219	327,916
On farms on following March 1---	169,904	217,037	131,136
Shipment out to following March 1	591,552	491,035	489,413
Available for consumption (carry- over disregarded)-----	708,958	564,808	466,977
Value of crop-----	\$2,080,000	\$1,197,000	\$737,000
Production index (1919 = 100)---	100	86	82
Value index (1919 = 100)-----	100	57	35

*Data drawn from Monthly Summary of Foreign Commerce, Department of Commerce, and from Production of Copper in the United States, issued in April, 1922, Department of the Interior.

†Data drawn from final crop estimates of Department of Agriculture; from Weather, Crops and Markets, Vol. 1, Nos. 11 and 17, 1922; and from Monthly Summary of Foreign Commerce, Department of Commerce.

The value index number for copper in 1920 was less than 10 per cent below that of 1919, but the index number for 1921 fell to almost one-fourth the figure of 1919. In the case of corn the value index number for 1920 fell to nearly one-half the figure for 1919 and further descent in 1921 brought the figure to practically one-third of the figure of 1919. The value index numbers for wheat were close to those for corn; a fall in 1920 to nearly one-half the figure for 1919, and further descent in 1921 to practically one-third of the level of 1919. The curve of descent with copper did not decline so precipitously as in the case of corn and wheat, but reached finally a slightly lower level. For purposes of general comparison therefore, particularly with respect to the situation in 1921, we may say that the value index numbers of copper, corn and wheat displayed comparable behavior. Let us now contrast the variables.

(a) *Foreign demand.* The net exports of copper rose from 87 million pounds in 1919 to 138 million in 1920 and 278 million pounds in 1921. The net export of corn rose from the nominal figure of 11 million bushels in 1919 to 18 million bushels in 1920, and soared in 1921 to 129 million bushels. The net export of wheat was high in 1919 at 267 million bushels, rose in 1920 to 307 million bushels and in 1921 reached 355 million bushels. These exports can not be compared directly in terms of index numbers, because of different relations with consumption and stocks. In the case of copper, increase in export did not make much impression on stocks, despite decline in production, because domestic consumption had slumped heavily. In the case of corn, the phenomenal export unquestionably had an influence on the grain exchanges, but the actual volume of increased export—when contrasted for example with 20 per cent of the crop, the amount that commonly leaves the farm, or with the figure for total crop—is small. In 1921, increased export of corn over 1920 did not have the effect of bringing the figure for shipment off the farm last year to the figure attained the year before. In the case of wheat, the net export in 1919 was 27 per cent of the crop, in 1920 35 per cent, and in 1921 45 per cent of the crop. Obviously such exports were possible only with large carry-over stocks in the country. The export in 1920 did not suffice to reduce the figure on the farms on

March 1 to the level of 1919 nor to increase the figure for shipment out from the farm to the level of 1919. But for 1921, the figure for wheat on the farm March 1, 1922, had fallen below the figure even for 1919, while the figure for shipment out was maintained on the level of 1920. The figures for wheat available for consumption indicate rapid decrease in stocks during the three years. The figure for 1921, 467 million bushels, contains a statistical error. The consumption of wheat in 1921 was undoubtedly more than 467 million bushels. The behavior of wheat on the Chicago Exchange in the closing days of May, 1922, demonstrated that we have had in the country more wheat than was statistically reported. Liverpool price movements have the same meaning.

All in all, explanation for price decline is not to be found in the figures for export, in foreign demand. European tactics in buying in the United States were however designed to "bear" prices. Europe could have secured elsewhere in the world a third of the wheat she secured from us, and all the corn she took could have been replaced by corn or other feed from other countries. Europe made these purchases here because the prices—credits and other conditions of payment considered—were cheaper than elsewhere. Europe needed copper sorely and was able to buy freely because it was cheap.

(b) *Domestic demand.* Copper withdrawn on domestic account rose about 10 per cent from 1919 to 1920. This was due in part to repair of depletion of civilian needs for copper, following the restrictive policy of the War Industries Board. In part, it reflected new constructions that had been postponed by war. In 1921, however, consumption of copper slumped, falling to about 65 per cent of the figure for 1919. Some of this copper remained in the hands of manufacturers and did not appear as finished goods. Copper demand for new construction is elastic, but demand for repair quite inelastic. In the case of corn, it is difficult to define consumption in a comparable manner. We produced practically the same amount of meat in each of the three years. But with the count of animals declining, a portion of this out-turn represented liquidation of husbandry rather than productive feeding operations. The operations of feeders were reduced in 1920 and in 1921 from the level of 1919. The figures for shipments of animals through reporting stockyards corroborate this state-

ment. Work horses consumed less corn in 1921 than in 1920 and 1919, because of the widespread decline of industries in the cities. The figure for corn on farms increased sharply from March 1, 1920, to March 1, 1921, but decreased some 200 million bushels between that date and March 1, 1922. These changes corresponded roughly with fluctuations in the crop yields. The shipments out were considerably increased in 1920 over 1919, but declined again in 1921, though not to the level of 1919. All in all, it seems clear that a reduction in corn consumption occurred, though obviously not to the extent observed in the case of copper. In the case of wheat, the figures are more impressive than in the case of corn, but they prove reduced consumption entirely too well. The amount available for consumption, which in the case of wheat might approximate the amount actually consumed, fell progressively during 1919, 1920 and 1921, reaching in the latter year a figure too low for credence. Records of flour mills in 1920 indicated a low out-turn, following heavy production in the last half of 1919. In 1921 this was much improved and the figure for flour in 1921 does not check with the figure given for wheat available for consumption. The figures for flour production for 1919, 1920 and 1921 do not demonstrate a noteworthy reduction in flour consumption. The carry-over of wheat, that has been necessarily disregarded in the table, furnishes the explanation. In the judgment of the writer, when the situation is checked up a year or two hence, it will be evident that there have been fifty million bushels more wheat in the country than now estimated. Even taking the figures as they are, decline in domestic demand for wheat did not fall below the level of withdrawal on domestic account for copper. In each case, quantitative evidence is clear that decline in domestic demand occurred with all three materials and we take it for granted that this was reflected in price. The resultant declines in price do not bear comparison.

(c) *Curtailability of production.* Here we encounter a radical difference. In the case of copper, production is centralized. Mines can be shut down on short notice; smelters may be closed, leaving ore untreated; and smelter copper may be allowed to pile up unrefined. The production of domestic smelter copper was practically the same in 1919 and 1920, but fell in 1921 to below 40 per cent of the level of 1919. The

refining of domestic smelter copper was reduced to about the same level. Imported smelter copper was refined to a somewhat larger extent. The production index number of domestic and foreign copper was 56. Under "disposal index number" is meant the disposition of copper on hand. The metal disposed of in 1920 was 20 per cent more than in 1919, but in 1921 fell to 89 per cent. In other words, the sales held up quite well, while production was heavily curtailed.

In the case of corn, the crops of 1920 and 1921 were both appreciably larger than the crop of 1919. The wheat crop of 1920 was 86 per cent of that of 1919, in 1921 82 per cent. This was curtailment by nature rather than by man. But even here the figure of 82 per cent contrasts glaringly with the production indices of copper. This is brought out still more clearly if one inspects the ratio of production index to value index. This in the case of copper is 0.69; in the case of wheat 0.42; and in the case of corn 0.31. It is clear that curtailment of out-turn of copper materially reduced the stocks while uncurtailed crops, particularly in the case of corn, had the effect of a glut in the market.

(d) *Situation of stocks.* In a normal fluid market, the state of stocks determines to a certain extent the position of the vendor and measures the extent to which a market can be called a buyer's market. Stocks of copper were more than trebled from 1919 to 1920 and rose still further in 1921. Stocks of corn, as represented by the figure under "available for consumption" rose somewhat in 1920 over 1919 as expression of a large crop, and declined slightly in 1921, as expression of a smaller crop. Stocks of corn, however, exhibited no increase comparable to the increase in copper. In the case of wheat stocks, as given under "available for consumption," there was a steady decline, though not to the extent indicated in the figures. Stocks on farms rose 29 per cent in 1920 over 1919 but fell in 1921 to 77 per cent of the level of 1919. Wheat shipped out on March 1 was a hundred million bushels less in 1920 than in 1919, and stood about the same in 1921. In the case of wheat and corn, no matter how viewed, stocks did not accumulate as statistical basis for market glut, as was the case with copper.

(e) *State of credits.* Whether excessive stocks operate to depress price depends largely on whether they are placed on

sale. With the three commodities, the market was, by and large, a buyer's market, except for premium grades of wheat, from the month of beginning progressive decline of price. The reactions of the sellers were in part determined by financial position. In the case of copper, the huge stocks accumulated in 1920 were not thrown on the market. They were pooled and funded through an issue of gold notes that were sold on the investment market. In all probability, the unfunded copper in 1920 and 1921, after the completion of this financial operation, was no higher than the figure for stocks in 1919. Bank pressure tending to force liquidative sale of copper was relieved by the funding operation. In the case of corn, no such transaction was possible. The corn remained in the hands of the grower, except to the extent that he shipped it out at the price of the day. During 1920 and 1921, the slightest indication of increased movement of corn from the farm tended to depress the price in the trading centers. In the case of wheat, this was less prominent. In the fall of 1921, wheat began to rise from a little over a dollar and reached a figure about \$1.40 early in this year, to decline again at the close of May to \$1.17. This cannot be explained on the basis of marketed wheat stocks. Curiously enough, as much wheat did not come out at the peak of this price as came out later during the decline.

The specific question concerning wheat and corn is this: Were farmers compelled to market grain in order to pay off loans? How largely were credits frozen in wheat and corn? To what extent was liquidation forced and the grains thrown on the market as an expression of banking pressure rather than as the result of desire of the grower to sell? Direct evidence on this subject is difficult to secure. In the case of corn, there is evidence, in the experiences of the War Finance Corporation, that holders of live stock had outstanding notes called and were refused new credits for feeding operations that would have resulted in increased consumption of corn. To what extent this led to forced sale of corn by farmers or merely impounded the stocks on the farm, is not clear. It seems probable that some corn was forced on the market through withdrawal of credit. In the case of wheat, the evidence is also positive. Instances are known, especially in the Pacific northwest, in which banks forced wheat growers to

sell their grain. But there is little evidence to suggest that this explained the overmarketing of the crop of 1921. There was holding back of wheat of the crop of 1920. There was overmarketing of the crop of 1921. The farmers who held back wheat of the crop of 1920 paid dearly for the experience; after the crop of 1921, the natural reaction was to take the opposite course and market early instead of late. The failure of the United States Grain Growers, Incorporated, to get under way for the crop of 1921 possibly accelerated the marketing of that crop.

The transactions of the War Finance Corporation afford many instances in which the direct or indirect aid of the corporation saved agriculturists from bankruptcy and kept their holdings off the auction block. This is a qualitative fact. The quantitative question, the amount of forced liquidation contrasted with the volume of ordinary sales, is naturally very difficult of determination. In the report of the Joint Commission of Agricultural Inquiry two pertinent facts are stated. (a) The liquidation of bank loans and discounts in the agricultural sections of the country were less than in the industrial sections during the period of decline of prices. (b) Bank deposits in the agricultural sections of the country declined more than in the industrial sections. The fact that liquidation in the industrial sections relatively exceeded that in the agricultural sections does of course not prove that banks in the agricultural sections did not call farmers' loans and compel them to sell products at spot prices. Reduction in deposits in agricultural sections are interpreted to indicate liquidation of obligations to country banks. With respect to the greater liquidation of loans and discounts in industrial sections as contrasted with agricultural sections, it seems probable that expansion and over-extension were greater in agriculture than in urban industries; and it seems certain that the power of liquidation, as evidenced by the writing down of inventories, was greater with manufacturers than with farmers. Finally, it must be recalled that of over twenty-eight thousand banks in the United States less than ten thousand are members of the Federal Reserve System. It is in particular the country banks with which the farmers deal that operate outside the Federal Reserve System. Such banks had it in their power to enforce liquidation of farmers' obligations, without the results

appearing in tangible form in the banking records that were at the disposal of the Joint Commission of Agricultural Inquiry. On the other hand, it is a matter of common knowledge the country over that banks did not foreclose, because foreclosure would have represented greater embarrassment to them than mere non-payment. And banks commonly refrained from forcing farmers to sell products because the returns would not have covered the obligations designed to be liquidated.

Contrasting copper with corn and wheat, it is clear that producers of copper possessed to the maximum the available facilities to protect themselves from glut by funding the excess stocks. The growers of wheat and corn possessed no corresponding facilities. While forced liquidation occurred to some extent, growers were for the most part permitted to carry on and hold or market at their own option. But the grower remained in a vulnerable position, since he was every day trying to decide whether higher price was in prospect, while the producers of copper were in a protected situation, since they were in position calmly to await the rise of copper that was certain to occur with revival of manufacture. They had to wait for a year but the increase finally arrived.

In the February number of the Quarterly Journal of Economics, 1921, appeared an unusually suggestive essay by Taussig entitled, "Is Price Determinate?" In this article he called particular attention to a zone of price fluctuations, which he termed the "penumbra," in which considerations of supply and demand do not directly apply. A scrutiny of conditions in the copper market and on the grain exchanges during the past two years suggests that in the case of corn and wheat the fluctuations within the penumbra have tended to produce effects downward, while no such situation has been present in the market of copper. In other words, the trading of the "bears" has been more effective with the grains than with copper. If this inference be correct, the fall in price of copper becomes still more striking.

If the four wheat-exporting nations could have held together for price control, the decline in price of wheat might have been moderated. James Stewart, Chairman of the Canadian war wheat board, testifying before the Committee on Agriculture of the Canadian House of Commons, expressed the

conviction that a wheat board in Canada alone would have been able to control the slump in price. But higher wheat prices for Europe might have driven Europe back to wheat substitutes.

Let us now summarize the comparisons between copper and the two grains.

(a) With all, increase in export demand.

(b) With all, decline in domestic demand, most pronounced in the case of copper.

(c) With copper, heavy accumulation of stocks; with corn moderate accumulation; with wheat decrease in stocks.

(d) Curtailment in production rigorously executed in the case of copper, absent in the case of the grains.

(e) State of credit an avoidable cause of embarrassment to producers of copper, an unavoidable cause of embarrassment, impending where not actual, to growers of grains.

From the standpoint of strategy and tactics, the position of copper producers was much superior to the position of grain growers. And yet, despite the advantages possessed by the copper producers compared with growers of grain, the price of copper declined more than the price of wheat and as much as corn. At no time did the price of cash wheat fall to the pre-war level. The cash price of corn and copper fell below the pre-war level. It is corn and copper that offer the most effective contrast. Copper possessed every available method of defence against price decline, and every known procedure was employed to retard and stabilize price decline. The growers of corn possessed no measures of defence against price decline. But the actual price decline was practically identical with both materials.

Such a survey makes one hesitate to interpret the relative, or over-relative, decline in the price of agricultural commodities in accordance with the explanations commonly offered. Too much prominence has been given to special circumstances and too little attention devoted to the general situation. In the published report of the National Agricultural Conference is to be found on page seventy the synopsis of an address by Wesley C. Mitchell, that was obviously characterized by particular restraint. I wish to lift two sentences out of the context: "Let me begin with an Irish bull: the fundamental reason why prices fell so far in 1920 and 1921 was that they

had risen so far in 1915-1919." "The war-time rise in the purchasing power of commodities over gold and the post-war fall in this purchasing power are world phenomena, not American phenomena. They are due to world causes, not to American causes." In the second section of the *Manchester Guardian Commercial* (May, 1922) J. M. Keynes, discussing the business débâcle of 1921, says: "Popular opinion attributes, in my opinion, too much to the war and too little to the results of the cyclical fluctuation of trade, as economists call it, which we have just experienced, on an unprecedented scale indeed, but of a type which was regular and familiar even before the war." In a memorandum on the world's monetary problems, written by Gustav Cassel, on invitation of the League of Nations and read at the International Finance Conference in Brussels, the chapter in reconstruction is introduced with the following words: "It is often contended, and still more often thoughtlessly repeated, that the present miserable situation of Europe is the result of the war. This is not true." We, too, frequently seek in our direct environment the causes of effects that are immediately sensible to us, just as animals seek in their immediate surroundings the origin of physical injury. A longer, as well as a larger, view is necessary. When we have defined the causes of the decline in price of copper, it is probable that we shall have defined to a large extent the causes for the decline in the prices of wheat and corn, without any appeal to the special explanations that have been commonly employed in discussions on declines of prices of farmers' goods.

The question of the low purchasing power of farmers' raw products in terms of finished goods of urban manufacture is a different problem. The purchasing power of copper for shoes, hats, furniture, phonographs and railway transportation was as low as that of corn. The purchasing power of copper for electrical motors was as low as the purchasing power of corn for corn starch. Unfortunate confusion has been introduced into the situation by the failure to separate fall in price of raw material from decline in the purchasing power of raw material for finished goods.